

IN THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the instant application. The present status of each claim is indicated in parentheses following the claim number. An instruction line precedes each claim that is amended, cancelled, or added by the instant paper.

1-41 (Cancelled)

Please **amend** claim 46 as follows:

42. (CURRENTLY AMENDED) An isolated or purified nucleic acid encoding a polypeptide ~~having~~ comprising the amino acid sequence of SEQ ID NO:8, said amino acid sequence comprising at least one immunogenic epitope.
43. (Previously Presented) The nucleic acid of claim 42, wherein said nucleic acid comprises nucleotides 10-1332 of SEQ ID NO:7.
44. (Cancelled) The nucleic acid of claim 42, wherein said nucleic acid is an isolated nucleic acid.
45. (Previously Presented) The nucleic acid of claim 42, further comprising an expression control sequence operably linked to said nucleotide sequence.

Please **amend** claim 46 as follows:

46. (CURRENTLY AMENDED) The nucleic acid of ~~claim 42~~
claim 45, wherein said expression control sequence
comprises a promoter.

Please **amend** claim 47 as follows:

47. (CURRENTLY AMENDED) The nucleic acid of ~~claim 42~~
claim 45, wherein said expression control sequence
comprises an enhancer.

Please **amend** claim 48 as follows:

48. (CURRENTLY AMENDED) A method of preparing a
polypeptide comprising a carboxy-terminal portion of
the heavy chain of botulinum neurotoxin serotype B
having at least one immunogenic epitope, comprising:

transfecting a cell with a nucleic acid encoding a
polypeptide comprising the amino acid sequence of
SEQ ID NO:8, said amino acid sequence having at
least one immunogenic epitope; and

culturing the transfected cell under conditions
wherein the nucleic acid is expressed and said
carboxy-terminal portion of the heavy chain of
botulinum neurotoxin serotype B is produced,

wherein the cell is selected from the group consisting
of a gram negative bacteria, a yeast, and a mammalian
cell.

49. (Previously Presented) The method of claim 48,
further comprising recovering from said transfected
cell at least one insoluble polypeptide comprising the
amino acid sequence of SEQ ID NO:8, said amino acid
sequence having at least one immunogenic epitope.

Please **amend** claim 50 as follows:

50. (Currently Amended) The method of claim 48, wherein
said ~~organism~~ cell is *Escherichia coli*.

Please **amend** claim 51 as follows:

51. (Currently Amended) The method of claim 48, wherein
said ~~organism~~ cell is *Pichia pastoris*.

52. (Cancelled)

Please **amend** claim 53 as follows:

53. (Currently Amended) A method of isolating an immunogenic polypeptide comprising the amino acid sequence of SEQ ID NO:8, said amino acid sequence having at least one immunogenic epitope, comprising:

culturing a cell transfected with an expression vector comprising a nucleic acid encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:8, said amino acid sequence having at least one immunogenic epitope under conditions wherein the nucleic acid is expressed; and

isolating from said transfected cell at least one insoluble polypeptide comprising the amino acid sequence of SEQ ID NO:8, said amino acid sequence having at least one immunogenic epitope,

wherein the cell is selected from the group consisting of a gram negative bacteria, a yeast, and a mammalian cell and wherein the ~~recovered~~ isolated polypeptide is immunogenic.

54. (Cancelled)

55. (Previously Presented) The nucleic acid of claim 42, wherein the AT content is less than about 70% of the total base composition.

56. (Previously Presented) The nucleic acid of claim 55, wherein the AT content is less than about 60% of the total base composition.

57-81 (Cancelled)

Please **amend** claim 82 as follows:

82. (Currently Amended) A recombinant host cell comprising the nucleic acid of claim 45, wherein said nucleic acid is expressed.

83-84 (Cancelled)

85. (Previously Presented) The recombinant host cell of claim 82, wherein said polypeptide is at least 0.75% (w/w) of the total cellular protein.

86. (Previously Presented) The recombinant host cell of claim 85, wherein said polypeptide is at least 20% (w/w) of the total cellular protein.